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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,263	02/16/2001	Jesus Al Ortiz	20843000200	4933

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EXAMINER

HONG, JOHN C

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/788,263	Applicant(s) ORTIZ ET AL.	
	Examiner John C. Hong	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13,15-23,59-61,63-65 and 67 is/are pending in the application.
- 4a) Of the above claim(s) 59-61,63-65 and 67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13,15-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 13 and 15-23 in the reply filed on 3/6/06 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13,15-17 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins III (U.S. Patent 5639989) in view of Nagaike et al. (U.S. Patent 5945213).

Regarding claim 13, Higgins discloses a method of EMI shielding by encapsulating an electronic component (50) with a conforming insulating base coating (24) (column 6, lines 20-22); applying a first conductive layer (60) over the base coating (column 6, lines 64-66); grounding the conductive layer to a ground trace (56) to form an EMI shield for the electric component (column 7, lines 47-51).

Higgins III fails to teach the step of vacuum metallizing a first conductive layer over the insulating base coating.

Nagaike et al. teach the step of vacuum metallizing a first conductive layer over the insulating base coating (col.2, lines 22-31).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the step of the step of vacuum metallizing a first conductive layer over the insulating base coating, as taught by Nagaike et al. on the method of Higgins III so as to protect against disturbing electromagnetic waves and /or radio frequency interference.

Regarding claim 16, Higgins discloses the first conductive layer comprises copper (column 7, line 35 & line 40).

Regarding claim 17, Higgins discloses applying a second conductive layer (62) over the first conductive layer (column 9, lines 47-54).

Regarding claim 21, Higgins discloses positioning the ground trace (56) around a periphery of the component (column 7, lines 47-51 & item 19 in Figure 2).

Regarding claim 22, Higgins discloses a plurality of components within the EMI shield (30, 50) (column 8, lines 35, 64).

Regarding claim 23, Higgins discloses exposing the ground trace through the insulating coating (column 6, lines 40-44).

3. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins III/Nagaike et al. as applied to claim 13 above, and further in view of Chant (U.S. Patent 4797508).

Higgins III/Nagaike et al. teach the limitations except the step of maintaining a temperature of the electronic component and insulating base coating bellow approximately 200 degree C during vacuum metallizing.

Chant teaches the step of maintaining a temperature of the electronic component and

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insulating base coating bellow approximately 200 degree C during vacuum metallizing (col. 9 lines 1-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the step of maintaining a temperature of the electronic component and insulating base coating bellow approximately 200 degree C during vacuum metallizing, as taught by Chant on the method of Higgins III/Nagaike et al. so as to achieve the vacuum metallized deposit embedded substantially in the coating.

4. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins III/Nagaike et al. as applied to claim 13 above, and further in view of Askew (U.S. Patent 6350951).

Higgins III/Nagaike et al. teach the limitations except the step of applying an insulating conformal layer over the first conductive layer.

Askew discloses the step of applying an insulating layer over the first conductive layer of an EMI shield (column 3, lines 30-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the step of applying an insulating layer over the first conductive layer, as taught by Askew on the method of Higgins III/Nagaike et al. so as to prevents damage to the underlying conductive layer which provides the electrical shielding of the working components.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins III/Nagaike et al. as applied to claim 13 above, and further in view of Gabower (*Thermoformed*

Vacuum Metallized Inserts For EMI Shielding of Electronic Devices, Consumer Electronics Show, Flamingo Hilton and Tower, Las Vegas, Nevada, pp. 151 -158).

Higgins/Nagaike et al. teach the limitations except for adhering the conductive & insulative layers via a glow discharge process.

Gabower discloses employing a glow discharge operation (page 156, 1st paragraph) when forming an EMI shield. Glow discharging is a preferred method of joining conformal coatings of dissimilar materials. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form an EMI shield as disclosed by HigginsIII/Nagaike et al. by using a glow discharge process as taught by Gabower in order to improve the adhesion of the insulator to the conductive layer.

Response to Arguments

5. Applicant's arguments filed 3/6/06 have been fully considered but they are not persuasive.

(1) Applicants argument on the motivation between the references of Higgins III and Nagaike et al. mentioning the Nagaike et al. states "it is not easy to form EMI shields over plastic jacket", but actually the Higgins III teaches "a molded plastic housing maybe coated with thin metal film (col. 2, lines 50-51)". So the combination is possible.

(2) Regarding claim 15, see the new office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Hong whose telephone number is 571-272-4529. The examiner can normally be reached on M-F(07:00-16:30)First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to be 'John C. Hong', written in a cursive style.

John C. Hong
Primary Examiner
Art Unit 3726

jh
May 26, 2006